

105TH CONGRESS  
1ST SESSION

# S. 377

To promote electronic commerce by facilitating the use of strong encryption,  
and for other purposes.

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## IN THE SENATE OF THE UNITED STATES

FEBRUARY 27, 1997

Mr. BURNS (for himself, Mr. LEAHY, Mr. LOTT, Mr. NICKLES, Mr. DORGAN, Mrs. HUTCHISON, Mr. CRAIG, Mr. WYDEN, Mr. ASHCROFT, Mr. DOMENICI, Mr. THOMAS, Mr. CAMPBELL, Mrs. BOXER, Mr. BROWNBACK, Mrs. MURRAY, Mr. KEMPTHORNE, Mr. INHOFE, Mr. FAIRCLOTH, Mr. GRAMS, and Mr. ALLARD) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

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## A BILL

To promote electronic commerce by facilitating the use of  
strong encryption, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*  
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Promotion of Com-  
5 merce On-Line in the Digital Era (Pro-CODE) Act of  
6 1997”.

7 **SEC. 2. FINDINGS; PURPOSE.**

8 (a) FINDINGS.—The Congress finds the following:

1           (1) The ability to digitize information makes  
2 carrying out tremendous amounts of commerce and  
3 personal communication electronically possible.

4           (2) Miniaturization, distributed computing, and  
5 reduced transmission costs make communication via  
6 electronic networks a reality.

7           (3) The explosive growth in the internet and  
8 other computer networks reflects the potential  
9 growth of electronic commerce and personal commu-  
10 nication.

11           (4) The internet and the global information in-  
12 frastructure have the potential to revolutionize the  
13 way individuals and businesses conduct business.

14           (5) The full potential of the internet for the  
15 conduct of business cannot be realized as long as it  
16 is an insecure medium in which confidential business  
17 information and sensitive personal information re-  
18 main at risk of unauthorized viewing, alteration, and  
19 use.

20           (6) Encryption of information enables busi-  
21 nesses and individuals to protect themselves against  
22 the unauthorized viewing, alteration, and use of in-  
23 formation by employing widely understood and read-  
24 ily available science and technology to ensure the

1 confidentiality, authenticity, and integrity of infor-  
2 mation.

3 (7) In order to promote economic growth and  
4 meet the needs of businesses and individuals in the  
5 United States, a variety of encryption products and  
6 programs should be available to promote strong,  
7 flexible, and commercially acceptable encryption ca-  
8 pabilities.

9 (8) United States computer, computer software  
10 and hardware, communications, and electronics busi-  
11 nesses are leading the world technology revolution,  
12 as those businesses have developed and are prepared  
13 to offer immediately to computer users worldwide a  
14 variety of communications and computer hardware  
15 and computer software that provide strong, robust,  
16 and easy-to-use encryption.

17 (9) United States businesses seek to market the  
18 products described in paragraph (8) in competition  
19 with scores of foreign businesses in many countries  
20 that offer similar, and frequently stronger,  
21 encryption products and programs.

22 (10) The regulatory efforts by the Secretary of  
23 Commerce, acting through the National Institute of  
24 Standards and Technology, and other entities to  
25 promulgate standards and guidelines in support of

1 government-designed solutions to encryption prob-  
2 lems that—

3 (A) were not developed in the private sec-  
4 tor; and

5 (B) have not received widespread commer-  
6 cial support,

7 have had a negative impact on the development and  
8 marketing of products with encryption capabilities  
9 by United States businesses.

10 (11) Because of outdated Federal controls,  
11 United States businesses have been prohibited from  
12 exporting strong encryption products and programs.

13 (12) In response to the desire of United States  
14 businesses to sell commercial products to the United  
15 States Government and to sell a single product  
16 worldwide, the Secretary of Commerce, acting  
17 through the National Institute of Standards and  
18 Technology, has sought to require them to include  
19 features in products sold both in the United States  
20 and foreign countries that will allow the Federal  
21 Government easy access to the plain text of all elec-  
22 tronic information and communications.

23 (13) The Secretary of Commerce, acting  
24 through the National Institute of Standards and

1 Technology, has proposed that United States busi-  
2 nesses be allowed to sell products and programs of-  
3 fering strong encryption to the United States Gov-  
4 ernment and in foreign countries only if the prod-  
5 ucts and programs include a feature guaranteeing  
6 the Federal Government access to a key that  
7 decrypts information (hereafter in this section re-  
8 ferred to as “key escrow encryption”).

9 (14) The key escrow encryption approach to  
10 regulating encryption is reflected in the approval in  
11 1994 by the National Institute of Standards and  
12 Technology of a Federal information processing  
13 standard for a standard of escrowed encryption,  
14 known as the “clipper chip”, that was flawed and  
15 controversial.

16 (15) The current policy of the Federal Govern-  
17 ment to require that keys to decrypt information be  
18 made available to the Federal Government as a con-  
19 dition of exporting strong encryption technology has  
20 had the effect of prohibiting the exportation of  
21 strong encryption technology.

22 (16) The Federal Government has legitimate  
23 law enforcement and national security objectives

1       which necessitate the disclosure to the Federal Gov-  
2       ernment of general information that is neither pro-  
3       prietary nor confidential by experts in information  
4       security industries, including cryptographers, engi-  
5       neers, and others designated in the design and devel-  
6       opment of information security products. By relax-  
7       ing export controls on encryption products and pro-  
8       grams, this Act creates an obligation on the part of  
9       representatives of companies involved in the export  
10      of information security products to share informa-  
11      tion about those products to designated representa-  
12      tives of the Federal Government.

13           (17) In order to promote electronic commerce  
14      in the twenty-first century and to realize the full po-  
15      tential of the internet and other computer net-  
16      works—

17           (A) United States businesses should be en-  
18      couraged to develop and market products and  
19      programs offering encryption capabilities; and

20           (B) the Federal Government should be  
21      prohibited from promulgating regulations and  
22      adopting policies that discourage the use and  
23      sale of encryption.

1 (b) PURPOSE.—The purpose of this Act is to promote  
2 electronic commerce through the use of strong encryption  
3 by—

4 (1) recognizing that businesses in the United  
5 States that offer computer hardware and computer  
6 software made in the United States that incorporate  
7 encryption technology are ready and immediately  
8 able, with respect to electronic information that will  
9 be essential to conducting business in the twenty-  
10 first century to provide products that are designed  
11 to—

12 (A) protect the confidentiality of that in-  
13 formation; and

14 (B) ensure the authenticity and integrity  
15 of that information;

16 (2) restricting the Department of Commerce  
17 with respect to the promulgation or enforcement of  
18 regulations, or the application of policies, that im-  
19 pose government-designed encryption standards; and

20 (3) promoting the ability of United States busi-  
21 nesses to sell to computer users worldwide computer  
22 software and computer hardware that provide the  
23 strong encryption demanded by such users by—

1 (A) restricting Federal or State regulation  
2 of the sale of such products and programs in  
3 interstate commerce;

4 (B) prohibiting mandatory key escrow  
5 encryption systems; and

6 (C) establishing conditions for the sale of  
7 encryption products and programs in foreign  
8 commerce.

9 **SEC. 3. DEFINITIONS.**

10 For purposes of this Act, the following definitions  
11 shall apply:

12 (1) **AS IS.**—The term “as is” means, in the  
13 case of computer software (including computer soft-  
14 ware with encryption capabilities), a computer soft-  
15 ware program that is not designed, developed, or tai-  
16 lored by a producer of computer software for specific  
17 users or purchasers, except that such term may in-  
18 clude computer software that—

19 (A) is produced for users or purchasers  
20 that supply certain installation parameters  
21 needed by the computer software program to  
22 function properly with the computer system of  
23 the user or purchaser; or

1           (B) is customized by the user or purchaser  
2           by selecting from among options contained in  
3           the computer software program.

4           (2) COMPUTING DEVICE.—The term “comput-  
5           ing device” means a device that incorporates one or  
6           more microprocessor-based central processing units  
7           that are capable of accepting, storing, processing, or  
8           providing output of data.

9           (3) COMPUTER HARDWARE.—The term “com-  
10          puter hardware” includes computer systems, equip-  
11          ment, application-specific assemblies, modules, and  
12          integrated circuits.

13          (4) DECRYPTION.—The term “decryption”  
14          means the unscrambling of wire or electronic com-  
15          munications or information using mathematical for-  
16          mulas, codes, or algorithms.

17          (5) DECRYPTION KEY.—The term “decryption  
18          key” means the variable information used in a math-  
19          ematical formula, code, or algorithm, or any compo-  
20          nent thereof, used to decrypt wire or electronic com-  
21          munications or information that has been encrypted.

22          (6) DESIGNED FOR INSTALLATION BY THE  
23          USER OR PURCHASER.—The term “designed for in-  
24          stallation by the user or purchaser” means, in the

1 case of computer software (including computer soft-  
2 ware with encryption capabilities) computer soft-  
3 ware—

4 (A) with respect to which the producer of  
5 that computer software—

6 (i) intends for the user or purchaser  
7 (including any licensee or transferee), to  
8 install the computer software program on  
9 a computing device; and

10 (ii) has supplied the necessary in-  
11 structions to do so, except that the pro-  
12 ducer or distributor of the computer soft-  
13 ware program (or any agent of such pro-  
14 ducer or distributor) may also provide tele-  
15 phone help-line or onsite services for com-  
16 puter software installation, electronic  
17 transmission, or basic operations; and

18 (B) that is designed for installation by the  
19 user or purchaser without further substantial  
20 support by the supplier.

21 (7) ENCRYPTION.—The term “encryption”  
22 means the scrambling of wire or electronic commu-  
23 nications or information using mathematical for-  
24 mulas, codes, or algorithms in order to preserve the  
25 confidentiality, integrity, or authenticity of such

1 communications or information and prevent unau-  
2 thORIZED recipients from accessing or altering such  
3 communications or information.

4 (8) GENERAL LICENSE.—The term “general li-  
5 cense” means a general authorization that is appli-  
6 cable to a type of export that does not require an  
7 exporter of that type of export to, as a condition to  
8 exporting—

9 (A) submit a written application to the  
10 Secretary; or

11 (B) receive prior written authorization by  
12 the Secretary.

13 (9) GENERALLY AVAILABLE.—The term “gen-  
14 erally available” means, in the case of computer  
15 software (including software with encryption capa-  
16 bilities), computer software that—

17 (A) is distributed via the internet or that  
18 is widely offered for sale, license, or transfer  
19 (without regard to whether it is offered for con-  
20 sideration), including over-the-counter retail  
21 sales, mail order transactions, telephone order  
22 transactions, electronic distribution, or sale on  
23 approval; or

24 (B) preloaded on computer hardware that  
25 is widely available.

1           (10) INTERNET.—The term “internet” means  
2           the international computer network of both Federal  
3           and non-Federal interconnected packet-switched  
4           data networks.

5           (11) SECRETARY.—The term “Secretary”  
6           means the Secretary of Commerce.

7           (12) STATE.—The term “State” means each of  
8           the several States of the United States, the District  
9           of Columbia, the Commonwealth of Puerto Rico, and  
10          any Territory or Possession of the United States.

11 **SEC. 4. RESTRICTION OF DEPARTMENT OF COMMERCE**

12                           **ENCRYPTION ACTIVITIES IMPOSING GOVERN-**  
13                           **MENT ENCRYPTION SYSTEMS.**

14          (a) LIMITATION ON REGULATORY AUTHORITY CON-  
15          CERNING ENCRYPTION STANDARDS.—The Secretary may  
16          not (acting through the National Institute of Standards  
17          and Technology or otherwise) promulgate, or enforce regu-  
18          lations, or otherwise adopt standards or carry out policies  
19          that result in encryption standards intended for use by  
20          businesses or entities other than Federal computer sys-  
21          tems.

1 (b) LIMITATION ON AUTHORITY CONCERNING EX-  
2 PORTS OF COMPUTER HARDWARE AND COMPUTER SOFT-  
3 WARE WITH ENCRYPTION CAPABILITIES.—Except as pro-  
4 vided in section 5(c)(3)(B), the Secretary may not promul-  
5 gate or enforce regulations, or adopt or carry out policies  
6 in a manner inconsistent with this act, or that have the  
7 effect of imposing government-designed encryption stand-  
8 ards on the private sector by restricting the export of com-  
9 puter hardware and computer software with encryption ca-  
10 pabilities.

11 **SEC. 5. PROMOTION OF COMMERCIAL ENCRYPTION PROD-**  
12 **UCTS.**

13 (a) PROHIBITION ON RESTRICTIONS ON SALE OR  
14 DISTRIBUTION IN INTERSTATE COMMERCE.—

15 (1) IN GENERAL.—Except as provided in this  
16 Act, neither the Federal government nor any State  
17 may restrict or regulate the sale in interstate com-  
18 merce by any person of any product or program de-  
19 signed to provide encryption capabilities solely be-  
20 cause such product or program has encryption capa-  
21 bilities. Nothing in this paragraph may be construed  
22 to preempt any provision of Federal or State law ap-  
23 plicable to contraband or regulated substances.

24 (2) APPLICABILITY.—Paragraph (1) shall apply  
25 without regard to the encryption algorithm selected,

1 encryption key length chosen, or implementation  
2 technique or medium used for a product or program  
3 with encryption capabilities.

4 (b) PROHIBITION ON MANDATORY KEY ESCROW.—

5 Neither the Federal government nor any State may re-  
6 quire, as a condition of sale in interstate commerce, that  
7 a decryption key, or access to a decryption key, be given  
8 to any other person (including a Federal agency or an en-  
9 tity in the private sector that may be certified or approved  
10 by the Federal government or a State).

11 (c) CONTROL OF EXPORTS BY SECRETARY.—

12 (1) GENERAL RULE.—Notwithstanding any  
13 other provision of law and subject to paragraphs (2),  
14 (3), and (4), the Secretary shall have exclusive au-  
15 thority to control exports of all computer hardware,  
16 computer software, and technology with encryption  
17 capabilities, except computer hardware, computer  
18 software, and technology that is specifically designed  
19 or modified for military use, including command,  
20 control, and intelligence applications.

21 (2) ITEMS THAT DO NOT REQUIRE INDIVIDUAL  
22 LICENSES.—Except as provided in paragraph (3)(b)  
23 of this subsection, only a general license may be re-  
24 quired, except as otherwise provided under the Trad-  
25 ing with the Enemy Act (50 U.S.C. App. 1 et seq.)

1 or the International Emergency Economic Powers  
2 Act (50 U.S.C. 1701 et seq.) (but only to the extent  
3 that the authority of the International Emergency  
4 Economic Powers Act is not exercised to extend con-  
5 trols imposed under the Export Administration Act  
6 of 1979), for the export or reexport of—

7 (A) any computer software, including soft-  
8 ware with encryption capabilities, that—

9 (i) is generally available, as is, and de-  
10 signed for installation by the user or pur-  
11 chaser; or

12 (ii) is available on the date of enact-  
13 ment of this Act, or becomes legally avail-  
14 able thereafter, in the public domain (in-  
15 cluding on the internet) or publicly avail-  
16 able because it is generally accessible to  
17 the interested public in any form; or

18 (B) any computing device or computer  
19 hardware solely because it incorporates or em-  
20 ploys in any form computer software (including  
21 computer software with encryption capabilities)  
22 that is described in subparagraph (A).

23 (3) COMPUTER SOFTWARE AND COMPUTER  
24 HARDWARE WITH ENCRYPTION CAPABILITIES.—

1           (A) IN GENERAL.—Except as provided in  
2           subparagraph (B), the Secretary shall authorize  
3           the export or reexport of computer software and  
4           computer hardware with encryption capabilities  
5           under a general license for nonmilitary end-uses  
6           in any foreign country to which those exports of  
7           computer software and computer hardware of  
8           similar capability are permitted for use by fi-  
9           nancial institutions that the Secretary deter-  
10          mines not to be controlled in fact by United  
11          States persons.

12          (B) EXCEPTION.—The Secretary shall pro-  
13          hibit the export or reexport of particular com-  
14          puter software and computer hardware de-  
15          scribed in this subsection to an identified indi-  
16          vidual or organization in a specific foreign  
17          country if the Secretary determines that there  
18          is substantial evidence that such software and  
19          computer hardware will be—

20                 (i) diverted to a military end-use or  
21                 an end-use supporting international or do-  
22                 mestic terrorism;

23                 (ii) modified for military or terrorist  
24                 end-use, including acts against the national  
25                 security, public safety, or the integrity of

1 the transportation, communications, or  
2 other essential systems of interstate com-  
3 merce in the United States;

4 (iii) reexported without the authoriza-  
5 tion required under Federal law; or

6 (iv) intentionally used to evade en-  
7 forcement of United States law or taxation  
8 by the United States or by any State or  
9 local government.

10 (4) REPORTING.—

11 (A) EXPORTS.—The publisher or manufac-  
12 turer of computer software or hardware with  
13 encryption capabilities shall disclose (for report-  
14 ing purposes only) within 30 days after export  
15 to the Secretary such information regarding a  
16 program's or product's encryption capabilities  
17 as would be required for an individual license to  
18 export that program or product.

19 (B) REPORT NOT AN EXPORT PRE-  
20 CONDITION.—Nothing in this paragraph shall  
21 be construed to require, or to permit the Sec-  
22 retary to impose any conditions or reporting re-  
23 quirements, including reporting under subpara-  
24 graph (A), as a precondition to the exportation  
25 of any such product or program.

1 **SEC. 6. INFORMATION SECURITY BOARD.**

2 (a) INFORMATION SECURITY BOARD TO BE ESTAB-  
3 LISHED.—The Secretary shall establish an Information  
4 Security Board comprised of representatives of agencies  
5 within the Federal Government responsible for or involved  
6 in the formulation of information security policy, including  
7 export controls on products with information security fea-  
8 tures (including encryption). The Board shall meet at such  
9 times and in such places as the Secretary may prescribe,  
10 but not less frequently than quarterly. The Federal Advi-  
11 sory Committee Act (5 U.S.C. App.) does not apply to the  
12 Board or to meetings held by the Board under subsection  
13 (d).

14 (b) PURPOSES.—The purposes of the Board are—

15 (1) to provide a forum to foster communication  
16 and coordination between industry and the Federal  
17 government; and

18 (2) to foster the aggregation and dissemination  
19 of general, nonproprietary, and nonconfidential de-  
20 velopments in important information security tech-  
21 nologies, including encryption.

22 (c) REQUIREMENTS.—

23 (1) REPORTS TO AGENCIES.—The Board shall  
24 regularly report general, nonproprietary, and non-  
25 confidential information to appropriate Federal

1 agencies to keep law enforcement and national secu-  
2 rity agencies abreast of emerging technologies so  
3 they are able effectively to execute their responsibil-  
4 ities.

5 (2) PUBLICATIONS.—The Board shall cause  
6 such information (other than classified, proprietary,  
7 or confidential information) as it deems appropriate,  
8 consistent with its purposes, to be published from  
9 time to time through any appropriate medium and  
10 to be made available to the public.

11 (d) MEETINGS.—The Secretary shall establish a  
12 process for quarterly meetings between the Board and rep-  
13 resentatives from the private sector with interest or exper-  
14 tise in information security, including cryptographers, en-  
15 gineers, and product managers. The Board may meet at  
16 anytime with one or more representatives of any person  
17 involved in the development, production, or distribution of  
18 encryption technology or of computing devices that contain  
19 encryption technology.

20 **SEC. 7. STATUTORY CONSTRUCTION.**

21 Nothing in this Act may be construed to affect any  
22 law intended to prevent the—

23 (1) distribution of descramblers or any other  
24 equipment for illegal interceptions of cable and sat-  
25 ellite television signals;

1           (2) illegal or unauthorized distribution or re-  
2           lease of classified, confidential, or proprietary infor-  
3           mation; or

4           (3) enforcement of Federal or State criminal  
5           law.

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